YAŞAR UNIVERSITY
FACULTY OF ARCHITECTURE
INTERIOR ARCHITECTURE AND ENVIRONMENTAL DESIGN DEPARTMENT
COURSE SYLLABUS

Course Title	Course Code	Semester	Course Hour/Week		Local Credit	ECTS
BIOCLIMATIC ARCHITECTURE	INAR 358	Spring	Theory 3	Practice 3	3	3

CourseType	Elective
Language of Instruction	English
Level of Course	Undergraduate Degree (First Cycle)
Mode of Delivery	
Prerequisites Course(s) (compulsory)	None
Special Pre-Conditions of the Course(recommended)	None

Course Coordinator

Name Surname	Mail	Web
Assist. Prof. Dr. ERAY BOZKURT	eray.bozkurt@yasar.edu.tr	

Course Instructor(s)

Name Surname	Mail	Web
Assist. Prof. Dr. ERAY BOZKURT	eray.bozkurt@yasar.edu.tr	

Course Assistant(s)/Tutor(s)

Name Surname	Mail	Web

Course Web Site

Aim(s) of Course

The course will help the students to understand interrelationships between nature and human interventions. It will develop an awareness of thematic traditions in site design. The students will learn about the site analysis, orientation, thermal and visual comfort strategies to reduce fossil fuel consumption and greenhouse effects.

Course Content

An integrated approach to the course will be explored from a variety of perspectives to address the following course objectives:Bioclimatic Approach: To provide information about site conditions, topography, daylighting, traditional ideas, and thermal design processes to evaluate, assess an holistic approaches to bioclimatic design. Aesthetic and Experimental Design: To introduce students to the aesthetic and experimental opportunities of the bioclimatic concepts.

Learning Outcomes of the Course

Upon successful completion of this course, the enrolled students will be gaining the following knowledge, skills and competences:

1	To understand the adventages of Bioclimatic Architecture
2	To learn how to design considering site conditions
3	To explore the design strategies for bioclimatic design
4	To suggest design solutions during building stages: design, construction, operation, and demolish
5	To learn the importance of water, waste, energy, and material management

6	To practice indoor air quality, vegetation, visual and thermal comfort strategies

COURSE OUTLINE/SCHEDULE (Weekly)			
Week	**Topics**	**Preliminary Preparation**	**Methodology and Implementation(Theory, practice, assignment etc.)**
1	Introduction to Bioclimatic Architecture	Presentation	Theory
2	Issues related to Bioclimatic Architecture	Presentation	Theory, discussion
3	Progress of Bioclimatic Approach	Presentation and Discussion	Theory, discussion
4	Environment and Climatic Zones	Presentation	Theory, assigment
5	Site Conditions:Sun, Wind, Topography	Presentation	Theory
6	Design Stage	Presentation and Discussion	Theory,
7	MID TERM	Exam questions	Exam
8	Site Analysis	Presentation	Theory, analysis
9	Building Envelope	Presentation	Theory, analysis
10	Construction Stage: Energy and Material	Presentation	Theory, assignment
11	Operation Stage: Thermal and Visual Comfort	Presentation	Theory
12	Operation Stage: Indoor Air Quality, Vegetation and Water Management	Presentation	Theory
13	Demolition Stage: Waste Management	Presentation	Theory
14	Presentation	Student Presentation	Practice, Project
15	Final Remarks: Future Intentions	Discussion	Practice, discussion

Resources

Required Course Material(s)/Reading(s)/Text Book(s)

1.Architecture and the ethics of form: a critical analysis of ecological design theory / by Michael E. Cadrecha. 1997. Manuscript, Dissertation. EnvDesign NA25.51.1997 C237
2.Building cities: towards a civil society and sustainable environment / edited by Norman Crowe, Richard Economakis and Michael Lykoudis; with Mark Gage. London: Artmedia Press, 1999.EnvDesign NA9053.H76 B85 1999
3.Cradle to cradle: remaking the way we make things /William McDonough & Michael Braungart. 1st ed. New York: North Point Press, 2002. Focuses on the nature of sustainability and the transformation of human industry through ecologically intelligent design.
EnvDesign TD794.5 .M395 2002 / Bus Econ TD794.5 .M395 2002
4.Design with nature / Ian L. McHarg. [1st ed.] Garden City, N.Y., Published for the American Museum of Natural History [by] the Natural History Press, 1969. Helped to define the fields of landscape architecture, urban and regional planning, and ecological design. EnvDesign HM206.M18
5.The environmental tradition: studies in the architecture of environment / Dean Hawkes. Lond: E&FN Spon; New York:Chapman & Hall, 1996. EnvDesign NA2542.35 .H39 1996
6.From eco-cities to living machines: principles of ecological design / Nancy Jack Todd & John Todd. Berkeley, Calif.: North Atlantic Books, c1994. EnvDesign GF50.T62 1994
7.Global symposium on sustainable environments / sponsored by the American Institute of Architects, U.S. Department of Energy, Washington, D.C.: American Institute of Architects, c1995. EnvDesign NA2542.3.G63 1994

Recommended Course Material(s)/Reading(s)/Other

1.Green shift: changing attitudes in architecture to the natural world / John Farmer; edited by Kenneth Richardson. 2nd ed. Boston: Architectural Press, 1999. EnvDesign NA2542.35 .F37 1999
2.A green Vitruvius: principles and practice of sustainable architectural design / the European Commission. [et al.]. London: James & James, 1999. EnvDesign NA2542.35 .G74 1999
3.The nature of order: an essay on the art of building and the nature of the universe / Christopher Alexander. Berkeley, Calif.: Center for Environmental Structure, 2002. Center for Environmental Structure series; v. 9. Alexander develops a comprehensive theory of how matter comes together to form coherent structures.

Paralleling, but not copying, recent results from complexity theory, he argues that the same laws apply to all structures in the universe; from atoms, to crystals, to living forms, to galaxies. (classic) EnvDesign NA2500.A447 2002 Shelved: Reserve

ASSESSMENT		
Semester Activities/ Studies	**NUMBER**	**WEIGHT in %**
Mid-Term	1	30
Attendance	0	0
Quiz	0	0
Assignment(s)	2	30
Project	1	30
Field Studies(Technical Visits)	0	0
Presentation/Seminar	1	10
Practice(Laboratory, Virtual Court,Studio Studies etc.	0	0
Other(Placement/Intership etc.)	0	0
TOTAL	**5**	**100**
Contribution of Semester Activities/Studies to the Final Grade		40
Contribution of final Examination/final Project/Dissertation to the final Grade		60
TOTAL		**100**

CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Fakülte	**Bölüm**
FACULTY OF ARCHITECTURE	**INTERIOR ARCHITECTURE AND ENVIRONMENTAL DESIGN**

No	**Programme Outcomes**	**Level of Contribut 1-lowest 5- highest**				
		1	**2**	**3**	**4**	**5**
1	To identify the rules relevant in international, national and regional interior architecture as well as the climatic, technological, socio-economic and other cultural factors which shape and sustain these principles					✓
2	To recognize and distinguish the interaction between human being and physical environment and the differences between needs, wishes, modes of behavior, social and spatial networks which characterize different cultures					✓
3	To employ the basic techniques for documentation the historic buildings with their interiors and the basic techniques in preparing restoration projects				✓	
4	To use and present the knowledge on function, structure and systems that forming them (life safety, environmental systems, systems of building-shell, systems of building services, structural materials, implementations and costs, technical documentation and the role of the client) during the interior design process					✓
5	To employ interior design principles to create new ideas and to use these in the design of interiors and environments					✓
6	To identify appropriate examples in interior design processes					✓
7	To collect project related information, register, apply and evaluate, them in interior design processes.					✓
8	To evaluate a comprehensive programme of an interior architecture project according to needs of users and the client, appropriate examples, spatial and equipment needs, space conditions, related laws and standards, design criteria and the living conditions of the different physically handicapped users					✓
9	To construct healthy buildings and interiors by recognizing the significance of sustainability in interior design with conservation of natural and cultural resources					✓
10	To demostrate the awareness regarding comprehension and conservation of the historical environment					✓
11	To develop clear and understandable questions, use immaterial thoughts in expressing ideas, evaluate contradictory ideas, conclude well-questioned results and test them according to similar measures and standards					✓

12	To employ the national and international professional standards and regulations in accordance with the ethical rules.	☐	☐	☐	☐	☑

ECTS /STUDENT WORKLOAD				
ACTIVITIES	**NUMBER**	**UNIT**	**HOUR**	**Total WorkLoad**
Course Teaching Hours(14 weeks*total course hours	14	Week	3	42
Preliminary Preparation and finalizing of course notes, further self-study	0	Week	0	0
Assignment(s)	2	Number	5	10
Presentation/Seminar	0	Number	0	0
Quiz	0	Number	0	0
Mid-Term	1	Number	3	3
Project	1	Number	16	16
Field Studies(Technical Visits)	0	Number	0	0
Practice(Laboratory, Virtual Court,Studio Studies etc.	0	Number	0	0
Final Examination/ Final Project/ Dissertation andPreparation	1	Number	4	4
Other(Placement/Intership etc.)	0	Number	0	0
Total WorkLoad				**75**
Total Workload/ 25				**3,00**
ECTS				**3**

ETHICAL RULES WITH REGARD TO THE COURSE (IF AVAILABLE)

Minimum of %80 attendance required for passing grade.
Late arrival and/or early departure from a session will be recorded as an absence.

ASSESSMENT and EVALUATION METHODS:

Final Grades will be determined according to the Yaşar University Bachelor Degree Education and Examination Regulation

PREPARED BY	Assist. Prof. Dr. ERAY BOZKURT
UPDATED	
APPROVED	